US Army Corps of Engineers
Rock Island District

DES MOINES AND RACCOON RIVERS FEASIBILITY STUDY NEWSLETTER

January 2002

BACKGROUND

The Des Moines and Raccoon Rivers Feasibility Study was initiated in September 1999 to identify opportunities for flood damage reduction within the City of Des Moines.

The study team has been seeking to identify the best combination of alternatives to provide a *comprehensive flood damage reduction system* for the community. Once identified, the team will evaluate the potential alternatives that may qualify for Federal cost-sharing.

The intent of this second Des Moines and Raccoon Rivers Feasibility Study newsletter is to provide an update on the overall study progress.

STUDY PROGRESS

The first phase of the study, detailed hydrologic and hydraulic modeling, will soon be completed. The modeling will provide rainfall, runoff, and river flow analysis.

To support this effort, the City has developed cross sections of the Des Moines River, Raccoon River, Four Mile Creek (to include 7th Ward Ditch), and Walnut Creek using Global Positioning System (GPS) equipment and conventional surveying equipment.

The cross-section information is being used in computer models that calculate water levels along the rivers and creeks which will be used to evaluate system improvements. New flood level estimates have been completed for the Des Moines River, Raccoon River, and Walnut Creek, and the flood level estimates for Four Mile Creek and 7th Ward Ditch are expected to be completed in January 2002.

The study team (Corps of Engineers and City of Des Moines) has started the second phase of the study. During this phase, the study team will gather data and analyze specific sites within the study area. The team will develop and evaluate flood damage reduction alternatives that meet the engineering, economic, environmental, cultural, and social feasibility criteria.

The following paragraphs discuss the status of the specific areas to be evaluated as part of the comprehensive flood damage reduction plan:

Birdland Park Levee – The Birdland Park area contains 170 acres of residential and commercial property, including the North High School complex and Birdland City Park. The levee was overtopped during the 1993 flood, causing extensive flood damages. Levee alignment and improvement alternatives are being evaluated using a range of possible levee heights.

Central Place Levee – The Central Place Business District, on the near north side of the City, contains numerous commercial properties. The levee built to protect the area was overtopped during the 1993 flood, causing extensive flood damages. Since 1993, the City has undertaken several measures to improve the level of protection provided by the levee. The study team is evaluating additional levee improvement alternatives and a range of possible levee heights.

Downtown Levee System – The downtown levee system contains three major reaches of levee which protect the right and left banks of the Des Moines and Raccoon Rivers. The Corps of Engineers constructed these levees in the 1960's and early 1970's. The protected areas contain over 1,800 acres of highly urbanized commercial, retail, industrial, residential, and public facilities at the City's central business core. Study team members are looking at the reliability of the existing levee system and are developing conceptual plans for providing increased protection for the affected area. Additionally, the study team is assessing the number of sandbag and gated closures that need to be made, manpower required, and available warning response times. The City of Des Moines is reviewing its emergency response capabilities as well. The study team also is evaluating the existing levees located along the Raccoon River upstream of Fleur Drive to determine if any further improvements may be warranted.

Walnut Creek at Grand Avenue – Walnut Creek flows through an 84-square-mile watershed located in the western City suburbs and in Dallas County. The West Des Moines – Des Moines Local Flood Protection Project provides protection to the west bank floodplain areas near Walnut Creek's confluence with the Raccoon River. The area of concern is the unprotected developed floodplain area located on the east bank of the creek in the vicinity of Grand Avenue in Des Moines. Alternatives to provide flood protection are being evaluated.

Four Mile Creek – The Four Mile Creek 100-year floodplain contains approximately 270 structures including houses, mobile homes, and businesses. The area has experienced frequent flash flooding with very little emergency response time. The City has installed a flood-warning system to allow adequate time to evacuate people from the flood area; however, there is not adequate response time to protect properties that have been damaged repeatedly over the years. The City has undertaken an effort, in cooperation with the Federal Emergency Management Agency (FEMA), to relocate residents and remove some flood-prone structures from the floodplain in the Williams Street area. The May 1975 Corps of Engineers report on Four Mile Creek will be reevaluated to determine if any structural and/or non-structural flood protection alternatives are justified.

7th Ward Ditch South of University Avenue – The 7th Ward Ditch is a nine-square-mile drainage area on the near east side of Des Moines. Low-lying developed properties in this area and downstream towards the confluence with Four Mile Creek frequently experience poor drainage and backwater flooding from Four Mile Creek. The study team will develop and evaluate conceptual alternatives for flood damage reduction along 7th Ward Ditch south of University Avenue.

The study team will continue to develop and evaluate alternatives for the areas discussed above. These alternatives will be available for viewing at a public open house (see "Open House Planned" below).

AERIAL MAPPING COMPLETED

Aerial topography with 2-foot contours is completed and available for use. This information will be used to develop alternatives and to create floodplain maps to show areas that could be flooded in the future.

OPEN HOUSE PLANNED

A public open house will be held in the spring of 2002. All interested persons will have the opportunity to meet with City of Des Moines and Corps of Engineers study team members to discuss, and provide comments on, the study alternatives identified to date. After the open house, the comments heard from the public will be analyzed and provided to the study team.

Additional information about the open house will be mailed and added to the study's website approximately one month before the open house. A summary of the open house will be provided in a follow-on newsletter.

STUDY INFORMATION AVAILABLE ON THE INTERNET

Information about the Des Moines and Raccoon Rivers Feasibility Study, including a map of the study area and study newsletters, is located on the Rock Island District's website. Draft flood profiles will be available soon on the website. The website is located at the following address: http://www.mvr.usace.army.mil/pdw/DM-RaccoonRiversFeasibilityStudy/mainpage.htm.

PUBLIC INVOLVEMENT COMMENTS/QUESTIONS

We welcome your input. If you have comments and/or questions regarding this study, please contact Mr. Dennis Hamilton, Project Manager, by telephone at 309/794-5634,
fax at 309/794-5710, or e-mail at
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If you prefer, you may write to Mr. Hamilton at the following address:

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If you are aware of someone who may wish be added to the study's mailing list to receive this newsletter (or our initial newsletter dated February 2000) and future study mailings, please ask him/her to contact Mr. Ralston or Ms. Sue Simmons, Rock Island District, Corps of Engineers. Ms. Simmons may be contacted at the Rock Island District address listed above, by telephone at 309/794-5573, or by
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